

**ALLOTMENT MANAGEMENT PLAN**  
**GOVERNMENT PRAIRIE ALLOTMENT**  
**WILLIAMS RANGER DISTRICT – KAIBAB NATIONAL FOREST**

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Agreed to  
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Approved By: Martie Schramm Date 5/28/08  
Martie Schramm  
District Ranger, Williams Ranger District

## 1. INTRODUCTION

This Allotment Management Plan was developed following a decision on the Environmental Assessment for Bellemont, Chalender, and Government Prairie Grazing Allotments, signed by Martie Schramm, Williams District Ranger, on September 28, 2007.

Government Prairie Allotment is located near the community of Parks on the Williams Ranger District of the Kaibab National Forest. The allotment includes approximately 12,250 acres of Forest Service lands and includes the central portion of the Government Prairie grassland, Klostermeyer Hill, and Fortynine Hill. Rural subdivisions of Parks are located on the west side of the allotment, and Brannigan Park is located in the southeast portion of the allotment.

## 2. BACKGROUND

The current permit for the Government Prairie Allotment authorizes a maximum of 265 adult cattle and 1,599 AUMs. The permitted grazing period is from June 15 to October 31. The allotment is divided into seven grazing pastures. The grazing system currently used is a deferred rest-rotation system (the Mineral Oaks North and South Pastures are managed as one unit). Current management results in livestock grazing up to 48 days in each pasture. Between 1996 and 2006, actual use ranged from 0 (during severe drought of 2002) to 265 adult cattle.

Table 1. Government Allotment; Pastures and Acres

Pasture	USFS Acres	Average Grazing Period - Days
Brannigan	3,407	46
East Prairie	2,082	49
McDermitt	3,140	33
Mineral Oak North	642	47
Mineral Oak South	1,270	50
NW Prairie	811	19
SW Prairie	902	19
Allotment Total	12,251	139 Days Permitted

**Vegetation:** The Government Prairie Allotment is dominated by grassland (Government Prairie), ponderosa pine, and ponderosa pine-Gambel oak vegetation types. Average vegetation condition score was 55 (Fair) in 1983, 35 (Poor) in 2002, and 51 (Fair) in 2005/2006. The cool season grasses Arizona fescue and squirreltail bottlebrush declined during the past 20 years while the warm season grass blue grama increased in most pastures. Small, scattered populations of noxious weeds occur in the allotment, primarily Dalmatian toadflax, bull thistle, and spotted and Russian knapweed.

**Soils and Watershed:** The allotment is dominated by grassland and savannah soil types (Mollisols or mollic subgroups). Average soil condition score increased from 57 (Fair) in 1983 to 70 (Good) in 2002 and 73 (Good) in 2005/2006. Average bare soil declined (an improvement) from 40% in 1983 to 22% in 2002 and 16% in 2005/2006. There are ephemeral stream channels within the allotment, but no perennial streams. There are no ephemeral or perennial lakes within or adjacent to the allotment.

**Wildlife:** Government Prairie provides important pronghorn habitat. Arizona Game and Fish Department data indicate that pronghorn recruitment (fawns/100 does) increased by 133% between 2001 and 2005 in Game Management Unit 7, compared to a 32% increase statewide (Arizona Game and Fish Department 2006). Fences have previously been modified within the Government Prairie Allotment to facilitate pronghorn movements. Gunnison's prairie dogs are known to occur in the allotment. A known goshawk nest area is located within the allotment. Potential pine-oak Mexican spotted owl Restricted Habitat occurs on the southern portion of the allotment, but the allotment occurs outside of designated spotted owl Critical Habitat unit boundaries. Spotted owls are not known to occur in or near the allotment, and the nearest spotted owl Protected Activity Center (PAC) is approximately 3 miles west of the northern end of the allotment on Sitgreaves Mountain.

### **3. DESIRED CONDITIONS**

The overall desired condition is maintenance of sustainable ecosystems within and surrounding the Government Prairie Allotment in which livestock grazing does not impair important ecosystem functions, such as providing habitat to support abundant wildlife populations and maintain biodiversity, providing high-quality water resources, maintaining soil stability and productivity, and maintaining vegetation diversity and productivity.

Specific desired conditions that apply to the Government Prairie Allotment include the following:

#### ***Vegetation***

- Maintain a stable to upward trend in total plant cover and range condition.
- Provide for a diversity of cool and warm season plants and maintain a stable to upward trend in cool season grasses.
- Protect Threatened, Endangered, and Sensitive plant species from adverse effects caused by livestock grazing and grazing management activities.
- Eradicate or control as many existing populations of noxious weeds as possible and prevent new introductions of noxious weeds caused by livestock management activities.

### *Soils and Watershed*

- Minimize erosion caused by livestock grazing and grazing management activities by maintaining a stable to upward trend in soil condition and maintaining or reducing percent bare ground across each allotment.
- Protect watershed resources such as ephemeral lakes and ephemeral stream channels and downstream water bodies from adverse effects caused by livestock grazing and grazing management activities.

### *Wildlife*

- Maintain sufficient levels of cover and forage throughout and at the end of the grazing period to support abundant wildlife populations.
- Protect Threatened, Endangered, and Sensitive wildlife species from adverse effects caused by livestock grazing and grazing management activities.

### *Recreation and Heritage*

- Manage livestock grazing to minimize adverse effects on recreation activities and developments.
- Protect heritage resources from adverse effects caused by livestock grazing and grazing management activities.

## **4. MANAGEMENT STRATEGY**

Livestock grazing is authorized on the Government Prairie Allotment under the terms and management prescriptions described below.

- Permitted livestock would remain at 265 adult cattle, but grazing period would be changed from May 25 through October 10 to June 15 through October 31. The delayed on-date is designed to promote greater development of cool season grasses during spring. Grazing period length would be the same (139 days), so maximum AUMs would remain at 1,599.
- The Mineral Oaks North and Mineral Oaks South Pastures would be rested from grazing each year for at least the next 3 years. One of the remaining five pastures would also be rested each year, resulting in more of the allotment being rested each year for the next 3 years.

**5. RESOURCE PROTECTION MEASURES** - The Annual Operating Instructions will incorporate specific and/or additional measures as needed per the adaptive management strategy.

1. Manage grazing intensity to not exceed **Moderate Use** category during the growing season, and to not exceed **Conservative Use** category at or near the end of the growing season when the potential for plant regrowth is limited.

The average growing season for the Williams Districts is:

March 15 - August 30: early to middle part of growing season; adequate re-growth is possible\* after grazing. \* *Adequate re-growth is not guaranteed during drought years.*

September 1 – November 15: end of growing season; not enough time for adequate re-growth after grazing

November 16 – March 14: dormant season; minimal to no growth

**Moderate Grazing Intensity:**

- Approximately equal to a maximum of 50% Utilization (grazing and trampling) of forage standing crop (current and previous years' growth) at the end of the growing season (November 15).
- Most of the accessible range shows some use.
- Areas between 1 mile to 1 ½ miles from water show some use.
- There is little evidence of livestock trailing to forage.
- Good forage plants have some seed stalks left (15-25% of stalks remain).
- About ½ to 2/3 of the good forage plants show some use.
- Some young plants show damage.
- Less than 10% of the poor forage plants are utilized.

**Conservative Grazing Intensity:**

- Approximately equal to a maximum of 40% Utilization (grazing and trampling) of forage standing crop (current and previous years' growth) at the end of the growing season (November 15).
- Rangeland may be topped, skimmed, or grazed in patches.
- Areas greater than 1 mile from water show little use.
- There is no evidence of livestock trailing to forage.
- Good forage plants have abundant seed stalks (60-80% of stalks remain).
- 1/3 to ½ of good forage plants have been grazed in key areas.
- Most young plants are not damaged.
- Poor forage plants are not grazed at all.

These grazing intensity categories can be exceeded in limited areas where livestock concentrate:  
a) within 1/4 mile of water developments (including temporary water hauls) and salt and supplement stations; and b) within 1/10 mile of pasture gates.

- 2) Consider a variety of factors related to drought when making decisions on annual authorization of livestock numbers and grazing period, including:
- amount and timing of current-year and previous-year precipitation received at weather stations nearest to each allotment,
  - current-year and previous-year forage production as they contribute to current standing forage, c) estimates of current-year and previous-year grazing intensity,
  - current and projected amount and distribution of water available to livestock (Howery 1999, Forest Service 2006).
- 3) Permittees must distribute livestock throughout the suitable grazing areas of each pasture using appropriate methods, including placement of salt and supplements, water hauling, or herding.
- 4) Livestock will not be allowed to graze at ephemeral wetland sites when soils are wet. Soils will be considered wet for 10 days following disappearance of standing water. At that time, soils will be assessed for saturation and range readiness.
- 5) Follow applicable Best Management Practices for range management from the *Soil and Water Conservation Practices Handbook* (Forest Service Handbook 2509.22) to minimize soil and watershed impacts caused by livestock grazing and grazing management activities. The following are the primary practices for this allotment:
- Monitor ground conditions before and during any future construction activities to avoid wet ground conditions that can negatively affect soil condition and water quality.
  - Grazing systems are alternatively rested and grazed in a planned sequence.
  - Grazing at a level that will maintain enough cover to protect the soils and maintain or improve the quantity and quality of desired vegetation. This practice will be applied through the utilization guidelines.
  - Fencing to improve cattle management, control access, prevent soil loss, and improve water quality. Fencing was not designed to prevent soil loss and improve water quality.
- 6) Follow applicable direction in the *Final Environmental Impact Statement for Integrated Treatment of Noxious or Invasive Weeds* to minimize the risk of new weed infestations caused by livestock grazing and grazing management activities. Relevant direction includes:
- Consider weed prevention and control practices in the management of grazing allotments;
  - Minimize transport of weed seed into and within allotments;
  - Maintain healthy, desirable vegetation that is resistant to weed establishment;
  - Minimize ground disturbance;
  - Promote weed awareness and prevention efforts among range permittees.

## 6. MONITORING

The Forest Service and/or the permittee will monitor grazing intensity in each grazed pasture at least once a year. Multiple key areas have been designated on maps and in GIS, and additional key areas may be designated. In addition to key areas, grazing intensity will be monitored in forested areas, including Mexican spotted owl Critical Habitat.

Various methods will be used to evaluate grazing intensity, including one or more of the following (and/or new methods as they become available): determination of forage utilization, amount of forage standing crop remaining at the end of the grazing cycle, percentages of grazed and ungrazed plants, plant stubble heights, litter or carryover vegetation from previous years, and visual appearance (Holechek and Galt 2000, Holechek and Galt 2004, Holechek et al. 2004: pages 195-196 and 248-251).

In addition to implementation monitoring conducted by the Forest Service, permittees would be required to monitor grazing intensity in each pasture and avoid exceeding grazing intensity levels specified above in Resource Protection Measures #1 (form attached). Coordination between the permittee and the Forest Service will be encouraged to help the permittee accurately determine grazing intensity. In addition, permittees would provide the Forest Service with actual use records for each pasture at the end of each grazing season, including:

- Number, class, and type of animal;
- Grazing period; and
- Estimate of average grazing intensity at key areas on departure from pasture.

Effectiveness monitoring determines whether management practices are effective in moving the allotment toward desired conditions. Effectiveness monitoring is designed to determine the trend toward or away from desired conditions for vegetation resources, soil and watershed resources, and wildlife resources.

Range condition and trend monitoring will be conducted on the allotment using Parker Three-Step clusters, Pace Frequency transects, and Paced transects. Parker Three-Step clusters and Pace Frequency transects will be read approximately every 10 years. Paced transects will be read at approximately 5 year intervals.

## 7. GRAZING CAPABILITY AND GRAZING CAPACITY

An analysis of grazing capability and grazing capacity was conducted in 2007. See Tables 2 and 3 for Capacity Classification by TES Map Units and Acres, respectively, on this allotment.

Grazing capability of a land area is dependent upon the interrelationship of the soils, topography, plants and animals. Grazing capability is expressed as one of three capacity classes:

*Full Capacity (FC)* – areas that can be used by grazing animals under proper management without long-term damage to the soil or vegetative resource. They must also produce a minimum of 100 pounds per acre of forage and are on slopes less than 40 percent.

*Potential Capacity (PC)* – areas that could be used by grazing animals under proper management but where soil stability is impaired, or range improvements are not adequate under existing conditions to obtain necessary grazing animal distribution. Grazing capacity may be assigned to these areas, but conservative allowable use assignments must be made.

*No Capacity (NC)* – areas that cannot be used by animals without long-term damage to the soil resource or plant community, or are barren or unproductive naturally. In addition, it includes areas that produce less than 100 pounds per acre of forage and/or are on slopes greater than 40 percent. Grazing capacity is not assigned to sites with a “no capacity” classification.

Table 2. Grazing Capacity Classification by TES Map Unit

	<b>TES Map Unit</b>
<b>Full Capacity</b>	006, 325, 401, 513, 518, 519, 537, 563
<b>Potential Capacity</b>	300, 302, 402, 407, 440, 525, 564
<b>No Capacity</b>	320, 322

Table 3. Grazing Capacity Acres on Government Prairie Allotment

	<b>Government Prairie Allotment</b>
<b>Full Capacity</b>	9,909
<b>Potential Capacity</b>	1,860
<b>No Capacity</b>	56

Grazing capacity is a function of grazing capability, forage production, proper use by livestock, and the level of management that may be applied. This analysis used forage production and grazing capability to determine the estimated grazing capacity of the allotment. Forage production measurements and estimates were taken and production data from the Terrestrial Ecosystem Survey (TES) was used for any data gaps. An allowable use standard of 40 percent was used on the Full Capacity acres. An allowable use standard of 20 percent was used for all Potential Capacity acres. Areas classified as No Capacity were not considered in the estimate of grazing capacity.

This analysis revealed that under new management, permitted livestock will utilize:

- 73% of the estimated grazing capacity on the Government Prairie Allotment.

In terms of total estimated forage production, permitted livestock will utilize:

- 27% of the estimated forage produced on the Government Prairie Allotment.



Table 4. Grazing Capacity for the Government Prairie Allotment

Government Prairie Allotment	Previous Management - 139 Days	New Management - 139 Days
A) Forage Required by Permitted Livestock	1,279,200 pounds (1,599 AUM's)	1,279,200 pounds (1,599 AUM's)
B) Estimated Grazing Capacity (FC and PC acres only with established utilization standards)	1,760,740 pounds (2,201 AUM's)	1,760,740 pounds (2,201 AUM's)
C) Total Estimated Allotment Forage Production (FC, PC and NC acres)	4,727,239 pounds (5,909 AUM's)	4,727,239 pounds (5,909 AUM's)
D) Forage required by permitted livestock as a percentage of the Estimated Grazing Capacity (A÷B)	73%	73%
E) Forage required by permitted livestock as a percentage of the Total Estimated Allotment Forage Production (A÷C)	27%	27%

## 8. RANGE IMPROVEMENTS

### 1) Existing Structures

Range improvements (fencing, waters, handling facilities, etc.) are critical components of any grazing management plan. All range improvements assigned to the permittee (Improvement Maintenance Responsibilities, page 11) need to be maintained in order to facilitate proper management of the allotment.

**Permittees are required to follow the District's Heavy Equipment Policy prior to beginning any ground disturbing activities which may require an archaeological survey and/or wildlife clearances.**

No heavy equipment use will be authorized until:

- We receive your request for heavy equipment use in writing;
- Your request includes the name of the tank(s) to be cleaned, their range improvement number, and/or a legal description, and/or include a map of the improvement;
- It includes a detailed description of the work to be done;
- Your request includes a timeframe for completion, an original signature and date;
- No work will begin until we get necessary clearances (archaeology, wildlife, NEPA, etc), and provide you with a written authorization for the work, including an agreement to the extent of work.
- The Forest Service will provide you with a list of certified Archaeologists and NEPA consultants that you may wish to use to expedite the process.

As you may know, our staff may not be able to respond to your requests in a timeframe that meets your needs, so the earlier you can get them in the better. Our preference would be to get that list from you no later than at your annual validation meeting in the spring. Better yet would be in the fall so that we can budget days for the various resource specialists in the new fiscal year.

## 2) New Construction

No new range improvements have been identified in the NEPA process for the Government Prairie Allotment.

## 9. MITIGATION MEASURES

The following mitigation measures apply to the Government Prairie Allotment.

### **Mexican Spotted Owl**

Pine-oak forest considered Mexican spotted owl Restricted Habitat occurs in the Government Prairie Allotment.

### **Northern Goshawk**

A known goshawk nest area is located within the allotment.

Management requirements for the Mexican Spotted Owl and the Northern Goshawk require that forage and habitat be maintained in a healthy condition for owl and goshawk prey species which are small mammals and various birds. Such conditions are generally met if forage utilization in forested areas and the small meadows under 200 feet in width does not exceed 40% and averages 20%. The permittee will take action so livestock grazing does not exceed these use levels. Actions may include: salt placement, water control, and herding or riding. If continued forage use above desired levels occurs, adjustments in the Allotment Management Plan, stocking level, or other management or administrative actions may be necessary. A map of Mexican Spotted Owl and Northern Goshawk habitat on the allotment will be provided.

### **Heritage Resources**

- Livestock management practices that concentrate cattle, such as placement of salt and construction of water developments, would be located so that there are no effects to heritage resources.
- Should any unrecorded prehistoric or historic archaeological sites be encountered within this allotment, they should be reported to the South Zone Archaeologist.
- Rock shelters considered archeological sites would be monitored. If cattle are using these sites for shelter and impacting the site, the shelter should be excluded from future livestock grazing.
- Should any tribes identify any plants within the allotments having traditional importance, rangeland specialists and South Kaibab heritage staff would work together to ensure that grazing management is allowing for natural regeneration of such plants.

## 10. FLEXIBILITY/ADAPTIVE MANAGEMENT

It is imperative that flexibility and adaptive management be considered when following this allotment management plan. Adjustments to the grazing sequence may be necessary due to weather constraints (i.e. precipitation patterns favor or do not favor certain portions of the allotment), or management activities in an allotment or pasture (P/J treatment or prescribed burning).

There may also be a need to vary livestock numbers to meet objectives. Drought may force the reduction of livestock numbers while on the other hand additional numbers above term permit may be appropriate in certain situations.

## 11. PASTURE PLAN

Proposed Government Prairie Allotment Grazing Schedule										
Option 1 - Rest Mineral Oaks for first 3 Years; and 1 Pasture Every Year.										
Pasture	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
SW Prairie	0	26	30	20	20	0	20	20	25	25
NW Prairie	25	0	30	19	19	20	20	0	20	25
East Prairie	40	25	0	30	30	20	30	25	0	29
Brannigan	42	46	35	0	30	30	30	25	32	0
McDermitt	32	42	44	30	0	29	39	29	32	30
Mineral Oak N	0	0	0	20	20	20	0	20	15	15
Mineral Oak S	0	0	0	20	20	20	0	20	15	15
<b>Total Days Grazed</b>	139	139	139	139	139	139	139	139	139	139
Option 2 - Rest Mineral Oaks for first 3 Years; and 1 Pasture 2 Years in a Row.										
Pasture	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
SW Prairie	24	25	25	20	25	20	25	25	0	0
NW Prairie	0	0	25	20	24	20	25	20	22	25
East Prairie	35	25	0	0	25	35	30	30	38	40
Brannigan	40	44	45	29	0	0	29	34	40	37
McDermitt	40	45	44	30	25	34	0	0	39	37
Mineral Oak N	0	0	0	20	20	15	15	15	0	0
Mineral Oak S	0	0	0	20	20	15	15	15	0	0
<b>Total Days Grazed</b>	139	139	139	139	139	139	139	139	139	139

Improvement Maintenance Responsibilities for Government Prairie Allotment #0051			
Improvement Name	Imp. Number	Units in Place	Comments
Gov't Mtn/Gov't Prairie Fence	2023	2.4	
Spitz Hill/Gov't Prairie Fence	2132	1.5	From gate south to SW corner of SW Prairie Pasture, then E for 1/2 mile
Gov't Prairie/Coconino NFB	2146	2.5	
Old 66 ROW Fence	2149E	1.0	
Old 66 ROW Fence	2149W	3.0	
Oak Hill Pasture Fence	2150	0.3	
McDermitt Pasture Fence	2151	2.0	
Oak Hill Corral	2152	1.0	
South Tank	2153	1.0	
Stump Tank	2155	1.0	
McDermitt Corrals	2157	1.0	
McDermitt Spring	2158	1.0	
RR Tank	2159	1.0	
Saddle Tank	2160	1.0	
Brannigan Tank	2161	1.0	
E. Prairie/Brannigan Fence	2221	1.5	
NW/SW/E. Prairie Pasture Fence	2222	2.2	
Pipeline Division Fence	2244	1.0	
Pipeline Tank Waterlot	2245	1.0	
West Pasture Division Fence	2246	1.0	
Triangle Fence	2247	0.5	
Pipeline Tank	2253	1.0	
Corner Tank	2254	1.0	
Mineral Springs	2255	1.0	
Levi Tank	2306	1.0	
Mineral Tank	2307	1.0	
Forty-nine Tank	2310	1.0	
El Paso Tank	2311	1.0	
Prairie Tank	2382	1.0	
Prairie Tank Waterlot	2383	1.0	
Gov't Knolls Trick Tank	2384	1.0	
Gov't Knolls Trick Tank Pipeline	2385	1.5	
Section 14 Tank	2387	1.0	
Forty-nine Tank Waterlot	2389	1.0	
Section 14 Tank Fence	2408	0.4	
BB Tank	2416	1.0	
Spitz Spring/Mineral Fence	2432	0.3	
Spitz/Gov't Prairie Fence	2438	1.5	East side of FR 141 in Parks
Spitz/Mineral Drinker & Pipeline	2440	1.0	

## GRAZING INTENSITY MONITORING RECORD

Allotment: \_\_\_\_\_ Pasture: \_\_\_\_\_

Data Collector: \_\_\_\_\_ Permittee: \_\_\_\_\_

Dates of Actual Use: \_\_\_\_\_

Type and Class of Livestock: \_\_\_\_\_

Number of Livestock: \_\_\_\_\_

KEY AREA NAME & LOCATION	MONITORING DATE	GRAZING INTENSITY CLASS
<i>Example – Kaibab Flat, ~½ mile NE of Empty Tank, NW ¼ of Section 28, 200' from Rd. 15</i>	<i>Example – June 5, 2007</i>	<i>Example – Moderate</i>

Grazing Intensity Choices: Light, Conservative, Moderate, Heavy, Severe

Precipitation Records:

\_\_\_\_\_  
\_\_\_\_\_

Notes:

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